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## ORIGINAL DEPARTMENT.

### COMMUNICATIONS.

#### BROMIDE OF SODIUM IN CONVULSIVE AFFECTIONS.

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I have been accustomed, for several years, to use the bromide of potassium in epilepsy, puerperal convulsions, and in the convulsive diseases of childhood, with a view to prevent the recurrence of the paroxysms. But having frequently met with only partial success I have been induced, more recently, to try another similar preparation, the bromide of sodium. I have reason to believe that the latter article is more prompt in its action and more certain in its results. I desire to state, briefly, a few cases in which I have used it, and should be happy to hear from any of your readers who may have had the opportunity of contrasting the effects of the two remedies.

Case 1.—A young lady, aged 17, having received an injury upon the cranium from a fall, developed, shortly afterwards, a mild form of epilepsy, *petit mal*. I put her, at once, upon the use of bromide of potassium in doses varying from fifteen to thirty grains, three or four times a day. This treatment did not arrest the paroxysms, which occurred several times every day.

I then ordered, instead, the bromide of sodium in twenty-five grain doses, repeated regularly three times a day. The paroxysms were immediately arrested, and my

patient has never had one since she took the first dose. The treatment was continued, with the same dose, for two months without any ill effects, and then discontinued. Five months have now elapsed since the treatment was commenced, and there has been no relapse.

Case 2.—A young married woman, aged 24, eight months pregnant with first child, had albuminuria and anasarca. Convulsions occurred suddenly, after several days' illness, accompanied by vomiting. There were no signs of labor. The convulsions recurred at intervals of an hour or two for twenty-four hours. I saw her for the first time after she had suffered from fifteen convulsive attacks. I was told that the bromide of potassium had been administered freely to her in large doses, without appreciable effect. The convulsions were growing more frightful and protracted. I at once ordered thirty grains of bromide of sodium, and the same remedy to be repeated in the dose of twenty grains every three hours afterward. In addition to this, ten grains of calomel and one drop of croton oil were placed upon the tongue and washed down with a little water. No more convulsions occurred after this. The bowels were freely purged, and the patient returned slowly to consciousness. The bromide of sodium was then continued in the last mentioned dose, *ter die*, for one week, when labor set in. A small sized dead foetus was delivered without any difficulty in a few hours, and the woman made a good recovery.

Case 3.—A young woman, primipara, aged 25, pregnant, and at full term, had a tedious labor, lasting forty-eight hours. Towards the close of the labor, while the child's head was passing the perineum, she was seized with a convulsion, which lasted several minutes. She recovered consciousness, however, and completed her labor nicely. She seemed to be "all right," and was able to give directions to the attendants concerning her comfort.

In order to guard against any lurking tendency to eclampsia, I administered twenty grains bromide of potassium, with three drops Norwood's tinct. veratrum, and on leaving, directed the bromide to be given every three, and the veratrum every six hours. Four hours later I was summoned back to my patient's bedside, and learned that she had suffered from three more convulsions more severe than the first. I then took one quart of blood from her arm, and increased the dose of bromide of potassium to thirty grains. This did not stop the convulsions. In fact, they seemed to be increased in violence and length under this treatment for several subsequent hours. I then resorted to half drachm doses of bromide of sodium every two hours, after the second of which the convulsions ceased and did not afterwards return. The woman died a few days afterward of puerperal fever.

Case 4.—A child, 12 months old, was seized with an epileptiform fit, the result of dentition. I saw it an hour afterwards and found it just going into a second convulsion. Upon its recovery from the spasm I administered five grains of bromide of sodium, and ordered a cathartic enema. The use of the same dose of the bromide was kept up every two hours subsequently. The child had no more fits and seemed quite well the next day.

In numerous other cases I have used the bromide of sodium with like good results. Wherever I suspect an overloading of the brain with blood I am in the habit of using the remedy freely with very satisfactory results. Whenever I wish to allay reflex irritation of the nerve centres I find no remedy, except perhaps chloroform, acts more promptly and efficiently than the bromide of sodium.

It does not offend the stomach, tastes more like common salt than anything else, and has never been followed, under my observation, by any unpleasant results.

## CASE OF PLURAL BIRTH WITH UNBROKEN PLACENTA.

BY ROBERT JOHNSTON, M. D.,  
OF Milford, Mich.

I have noticed cases reported by Dr. J. M. Hall, of Fayetteville, Ohio, and Dr. A. G. Blodgett, of West Brookfield, Mass., in the MEDICAL AND SURGICAL REPORTER, and am reminded of cases occurring in my practice which I will relate.

Case 1.—I was called at 2 A. M., May 23, 1873, to see Mrs. M., æt. 35, in her sixth confinement. After an ordinary labor, she was delivered, at 5 A. M., of a female child weighing seven pounds.

The child being quite lively, and crying lustily, I divided the cord at once and removed the child. Placing my hand over the abdomen of the patient to see that the uterus was contracting down, I felt the motion of another child, Mrs. M. observing at the same time that "there must be another child," as she "felt it move."

I found on examination that the head had entered the superior strait, and as pains soon were regular and strong, anticipated a speedy delivery, but at the end of four hours' hard labor the head had not entirely passed out of the pelvis.

As the uterus showed symptoms of exhaustion, I gave a full dose fluid ext. ergot, and repeated the dose in twenty minutes, which brought on violent pains. During one of these pains (the woman assisting with her whole strength) the entire sack, placenta and membranes intact, containing liquor amnii and a nine-pound boy, was thrown out of the vagina.

I immediately tore open the sack and divided the cord. Both children are living and doing well.

There was no bag of water in front of the head of the second child at any time during labor, which led me to suppose that the membranes had been ruptured during the first labor.

The placenta to which the first child had been attached was delivered soon after the birth of the second child.

Mrs. M. is a stout, muscular woman, and assisted the uterine expulsive force with as much voluntary strength as it is possible for any woman to put forth, so that I think this sack must have sustained more than the average amount of pressure brought to bear

upon the child during labor. I have been inquiring, in relation to this case, if it is possible for that *thin, tender, semi-transparent membrane, which tore almost as easily as wet paper*, to have supported a pressure of five hundred pounds, which, it is estimated by some practitioners, is necessary to force a child through the pelvis.

Case 2.—August 21, 1873, saw Mrs. A. I found her two months advanced in pregnancy, os uteri dilated, slight hemorrhage. The ovum was expelled the next day, which a close examination showed to be unruptured, the sack still containing the liquor amnii, which could not be forced out until it was ruptured.

## EDITORIAL DEPARTMENT.

### PERISCOPE.

#### RECENT PROGRESS IN MEDICINE AND SURGERY.

The excellent addresses at the opening of the British Medical Association each annual meeting touch upon nearly all the points of interest which have occupied the medical world during the past year. Expressed as they are by the master minds of the day in their respective branches they cannot fail to be judicious and sound. We have, therefore, selected a number of quotations from the various addresses, which we now lay before our readers.

#### Drinking Water.

Sir WM. FERGUSSON, the President, in his opening address says on this topic:—

It seems almost by instinct that, in the humblest of our cottages, and in most of our moderate, unpretending dwelling-houses, there is a desire to have a supply of rain-water. The pump or the nearest open well or spring may be resorted to for water to drink; but the small quantity that can be caught from a stone, tile, or slate roof, is eagerly sought by the judicious housewife.

The quality of this water suits domestic purposes better than the brightest from well or pump. Largely though this little luxury is indulged in, for the water-butt abounds in every district, it is curious how this sort of instinct, as I have called it, has been neglected by many who have catered for the supply of water on a large scale. If this water is so esteemed by poor cottagers, why should it not be available to the whole community? If the rich man, with a big roof over his head, collects it, at considerable expense, for his baths and washings, why have we not more of it? But here I touch the margin of an important question regarding water-supply to large communities. Is such a supply, supposing it to be the most desirable, to be had at reasonable cost? That it is desirable can scarcely be doubted. There are many who approve the project of

increasing the supplies of Manchester, Birmingham, and other midland towns, including London, from the natural lakes of Cumberland and Westmoreland. But might not something be done, less stupendous, yet equally effective? Natural lakes, of sufficient bulk, are not to be found in many districts; but might not artificial ones be constructed, which would largely supplement our present water-supplies? In most of the upland districts in this country there are spaces, hollows, ravines, and valleys, where, as much of the surface is otherwise worthless, the water might be dammed up, and lake above lake might be made to appear on the landscape. This is, as we all know, no new proposal. It has been acted upon in countries of ancient historical date, where we fancy that civilization was never equal to that we now boast of, and the custom prevails to a considerable extent in this island. But all that has yet been done in this way among us is but little better than the action of the poor cottager who is content to catch from the fleeting shower a pitcher or tubfull of the precious gift of nature. Look to the rainfall of a season in this country, and consider how much, or how little, of this gift from heaven is actually used by man. Of all the necessities of life this is the one which comes upon us in this island most bountifully; and yet how much it is neglected! Instead of letting the floods damage our best alluvial soils, destroy vegetable and animal life, endanger man himself, and finally flow uninterruptedly to the sea, might not much of this flood be impounded on our watersheds, and there form small and large reservoirs and lakes which would be ample supplies of the best water at every season of the year, and even keep in fair volume some of those primitive streams which, doubtless, were the attraction of those who originally settled on their banks? It is distressing to see, in some of our large towns, to what condition these once fair streams have been reduced; the water is taken off above until the bed of the river has been dried, and then let on again in every imaginable degree of pollution. Under such circumstances the water thus taken from the stream might be supplemented by

the upper stores; or, better still, these stores might be relied upon for most of the requirements of large communities.

#### The Doctrine of Inflammation.

Dr. Parkes, in the address on medicine, remarks:—

Once everything was dyscrasia; and the belief that a profound alteration of the fluids, and especially of the blood, underlies most morbid changes, for a long time governed a large school of pathologists.

In this country it never obtained great weight, though it certainly tended to modify our ideas of the origin both of cancer and of tubercle. Gradually losing ground before the pressure of opposing facts, the doctrine of crasis at length gave way to a local pathology almost as extreme. The theory which superseded it was the celebrated cellular pathology of Virchow; that theory which looked only to the individual elements; which traced all to growth of cells, and which virtually rejected the idea of exudation in the old sense of the word. It was admitted, indeed, that nutritive cell-less fluid emerged in disease from the vessels as in health, but it was caught up and appropriated by the cells met with outside the vessels, and especially by the connective tissue corpuscles. At one time it seemed as if the time-honored term "exudation" would be banished from pathology, and the old doctrine of inflammation seemed altogether undermined. But this cellular pathology was, like the creed it superseded, pushed too far. True to a large extent, it was made to embrace conditions beyond it, and the inevitable reaction came. In 1867 Cohnheim described the transit of the white blood-cells through the unruptured walls of the capillaries, and the old doctrine of exudation had again an empirical foundation. I say Cohnheim described, but I did not say he discovered. For the discovery had long been made, and the fact that it had been made and had been disregarded is a striking instance of want of appreciation of a cardinal fact, of which so many cases are recorded in the history of all sciences. It is bare justice to record that in 1839 William Addison, now of Brighton, perfectly described the emigration of the white blood cells, as well as many other phenomena which attend inflammation. The fact did not escape notice, and one writer, at least, Charles Williams, in his well-known work on the *Principles of Medicine*, appreciated its importance. But, as a practical matter, the discovery fell dead, and when Cohnheim announced the fact twenty-eight years later, the world of pathology was stirred to its depths. It is also but justice to observe that the chief microscopic phenomena of inflammation and the processes of stasis and exudation were nearly as well described twenty-five years ago by W. Addison and Williams as they are now, though certainly the proliferation of tissue-cells outside vessels was not known.

At present the pathology of inflammation

seems settling down on a mixed humeral and solid basis. It seems to be admitted that the albumen in the blood which feeds the organs partakes of the quality of the food which supplies it, and is modified also by the condition of the organs, whose action prepares its introduction into the main torrent of the blood. Degrees of nutritive adaptability may, therefore, exist in it, and we may fairly assume that the composition of the blood albumen must vary, and that it is quite possible it may be sometimes so degraded as to justify the idea which underlaid the Vienna doctrine of crasis. But it seems also clear that the main phenomena of nutrition (normal and abnormal) rest with the cells and with the ultimate molecules, so to speak, which, though without a cell wall, can be classed with cells. The cellular pathology is, to this extent, an undoubted and valuable generalization.

#### On Phthisis.

Elsewhere he adds:—

If the doctrine of inflammation has thus, as it appears to me, made the full circle of change, the same may be almost said of phthisis pulmonalis. Laennec's genius, so sure and accurate when he was dealing with the interpretation of physical phenomena, failed when he attempted a definition of phthisis. Like many a geographer, he wished to fill up his blank map, to insert a coast line here and a watershed there, and to have everything defined, described, and completed. It was an impossible attempt, for the country had not been surveyed.

In two points late researches have, I think, influenced our view of looking at phthisis. In the first place, it has been shown how many cases of phthisis are caused by removable conditions: breathing of air impure with solid particles, constrained positions, syphilis, etc., are now known to produce many cases of wasting lung-diseases, and, as it is possible to prevent these, and thus to lessen the prevalence of phthisis, we have now a greater element of hope than formerly. On the contrary, the evidence of the so-called infective nature of phthisis, that is, the way in which it can originate in the lungs from distant infected parts, the way in which it extends to adjoining parts, or, perhaps, to distant parts of the lung by absorption from a diseased lung centre, and thus returns and returns until fatal inroads are made on the organ or the system at large; the constant production, in fact, of fresh centres of spread, is a discouraging aspect. On the whole, the last thirty years have done much for the treatment of phthisis, but it is not all unmixed gain, and the amount of future progress is uncertain.

#### The Radical Cure of Rupture.

Prof. JOHN WOOD, of King's College Hospital, has these instructive remarks on this subject:—

I have long thought that we might, in favorable cases, safely do more than we now



attempt, to prevent a return of the protrusion after the operation for the relief of strangulation. After performing operations for the radical cure more than two hundred times, I had grounds for the belief (which other operations on the peritoneum also favored) that in a healthy subject the peritoneum might be dealt with as freely and as safely as any other tissue; and also, that the chances of bad results from peritonitis would depend upon the injury sustained by the bowel in strangulation, rather than upon any way of dealing with the peritoneal sac and parietes after the strangulation had been relieved, provided that due drainage be secured. In cases where the bowel and omentum are congested only, and most likely to recover when placed into their natural cavity, especially in young and healthy subjects, I concluded that the attempt would be justified, and would probably be successful. If so, the advantage of preventing a lifelong trouble by the operation which relieves strangulation is obvious. The kind of cases I selected for such an attempt, and the nature and results of the proceeding, will be best conveyed to your minds by a short *resumé* of the three cases where I have had the opportunity of carrying it into practice.

On June 29th, 1868, was admitted into King's College Hospital a young man, Alfred Fuller, aged 21, 61 Warden Road, St. Pancras, with a strangulated right oblique scrotal hernia. The tumor had occurred suddenly from lifting. It was of the size of the fist, and had been strangulated twenty-four hours. He had constipation, violent retching and vomiting (not fecal), a quick pulse, and anxious face, pain in the epigastric, and much pain and tenderness in the tumor, upon which several ineffectual attempts at taxis had been made. I put him well under chloroform, and made a fair and full attempt at reduction by the taxis, but in vain. I then made an oblique incision over the tumor, dividing the layers in the usual way, and laying open the sac to the extent of three inches. The sac contained a moderate amount of omentum, covering a knuckle of bowel, all congested, and the bowel slightly ecchymosed, and there was about an ounce and a half of bloody serum in the sac. The point of strangulation was at the deep inguinal ring, and it was divided by an upward cut. The bowel was then drawn down slightly and carefully examined. It presented the usual indentation, but was smooth and shining. It was then returned, and after it the omentum; the latter being carefully spread over the deep opening. The sides of the sac were then brought together, so as closely to embrace the cord over the whole length of the canal. The handled curved hernia needle used in my operation for the radical cure, armed with silvered wire, was then employed to bring together the sides of the sac, together with the aponeurotic structures along the whole length of the canal. A good view of the conjoined tendon was obtained, and the wire fixed in it in two places. The loop and ends of the

doubled wire were then brought out at the upper and lower ends respectively of the incision. Four interrupted wire sutures were then placed through the skin between these points. The wound was dressed with carbolic lotion, and covered with gutta-percha skin, and cotton wool powdered with McDougall's powder to absorb the discharges. The interrupted sutures were removed on the fourth day, primary union having been by that time obtained throughout, except where the thick wires passed through the extremities of the wound, and effectively kept up the drainage. These were kept in for ten days. There was not the slightest sign throughout the case of the peritoneum being inflamed, and the abdominal tenderness which was present at the time of the operation passed away entirely. The sickness ceased directly after the operation, and the bowels were opened naturally two days afterward. Erysipelas being present at this time in the ward, the patient was attacked by it on the sixth day. A partial reopening of the wound was the consequence, together with suppuration in the fundus of the hernial sac. The pus passed freely along the wires, and there was no burrowing. The suppuration in the sac caused obliteration and shrinking of that structure, and the testis was drawn by the subsequent contraction into the upper part of the scrotum. The patient was discharged, wearing a light truss, August 15th, 1868.

During the first year after the operation I saw him twice or three times. There was no cough impulse whatever when last seen; all the parts being very firmly traced up in the groin and around the cord. As he was repeatedly enjoined to show himself at once if any pain or weakness showed itself, and seemed fully impressed with the danger from strangulation which he had escaped, I have, I think, some right to conclude that there has been no return. The difficulty of following cases for a number of years in the nomadic habits of that part of our population which furnishes the most numerous favorable cases for the radical cure is one which I experienced in this case.

It has been said with respect to this operation, that evidence is wanting as to the permanency of the cure, and I am free to confess that it is exceedingly difficult to watch a couple of hundred cases for the space of ten or eleven years. The constitution of human nature is such that you cannot hope for the generality of patients to show themselves occasionally for such a length of time, or even to write reports to the surgeon if they are not further troubled with the ailment of which he has cured them. It requires that powerful spring to gratitude which was said by the cynical French philosopher to consist in "a lively sense of favors to come," which is wanting in a case where there is no more for the doctor to do. I have found that the unsuccessful cases are more likely, by the law of gratitude just enunciated, to return upon your hands than the successful ones are, as a bad

shilling expects to be replaced by a good one. I think, therefore, we have the better right to the position of reckoning in the same proportion of failures and cures cases which have not been seen twelve months after the operation, as those which have been examined after that time.

Now, out of 183, most of them unselected cases of inguinal hernia, of which I have notes (including 7 females and 4 cases of double rupture, both operated on), in 107 cases the results are pretty perfectly known. I find that 51 of these were more or less unsuccessful; 42 returned in the first year after operation; that is, the patient could not do without wearing a truss after the first year. Of these, by far the greater number were so much improved that they were made comfortable by a truss, which was not the case in most instances before the operation. Some, but not many, were as bad as before the operation. Mr. Kingdon, of the City of London Truss Society, has kindly forwarded to me the names of twelve of those who had applied to that institution for the supply of a truss after an operation at my hands.

56 out of the 107 were cases which continued to be successful subsequently to a year after the operation, as ascertained either by direct examination by myself, other surgeons, or satisfactory to the patient himself, and either wearing no truss at all, or only occasionally, as a precaution, after the first year from the operation. Of these, 7 were noted from thirteen to twenty-one months after the operation; 7 two years; 7 three years; 7 from four to six years; 7 from six to eight years; and 4 from nine to eleven years after operation. Reckoning operations on both sides and repetitions of the operations, I have done the operation more than two hundred times. Out of these, I have had three deaths; one from pyæmia, one from erysipelas, and one from peritonitis. These have been made public to the profession on more than one occasion, because I judged it right and fair that in an operation of this kind the facts should be made known as far as possible.

#### On Anæsthetics.

He adds:—

In the use of *anæsthetics*, we find now rising a revival of the rivalry between chloroform and ether, which the fame and support of the late Sir James Y. Simpson had decided in this country in favor of the former. We follow but tardily, in this old country, in that combination of pleasure with utility which has led lately the inventive genius of our transatlantic brethren to the association of æsthetics with anæsthetics in the performance of operations under these agents to an *obligato* accompaniment upon the organ, and an appropriate address by a popular preacher, improving the occasion on behalf of morals. The comparative safety of these agents is unquestionably a most important point, and one that must ultimately decide the matter in favor of that

anæsthetic the use of which involves the fewest casualties. The chief difficulty in determining this is the natural disinclination to make public such cases. It is less objectionable, however, to do so when a certain lapse of time has occurred after the accident; and it is to be hoped that, in the not very far future, we may arrive generally at that philosophic frame of mind which will consider it as much a duty to publish unsuccessful cases as it is a gratification to achieve the glory of a brilliant result.

#### The Physiology of the Febrile State,

Was the topic of Dr. J. BURDON SANDERSON'S address. Towards the close his words were:—

Of the three or four tissues of which the mass of the animal body is composed, the nervous, the glandular, the connective, and the muscular, there is one only which has as yet been sufficiently investigated in its relation to ordinary heat production, viz., the muscular. With respect to this tissue, it cannot be shown that it is the special seat of the increased chemical activity which produces fever, but it can be shown that even if every other source of heat production were excluded, the variations of intensity of which muscular oxidation is capable would be sufficient quantitatively to account for the variations of bodily temperature which occur in fever. In this respect, therefore, I propose to refer to some of the experimental facts known to physiology as to this heat-producing function of muscle.

I will first mention an experiment which belongs neither to the laboratory nor to the hospital, our two ordinary sources of information. A man works in an extremely hot place, for example the stoke-hole of a tropical steam vessel, where he is subject to a temperature of perhaps 120° to 130° F. Under such circumstances a dog would soon die, but so efficient is the apparatus for the discharge of heat at the surface in the human body, that not only life but continued muscular work is possible. If now we place the same man under slightly altered circumstances, and set him to work in what is termed a "dead end" in one of the so-called "hot mines" in Cornwall, where not only the air is heated, but the workman is rained upon by the incessant dripping of water at a temperature of say 105° F., so that the air is constantly saturated with moisture, we find that, although the temperature is nothing like so high as in the stoke-hole, he suffers so much more from the effect of it that continued labor is impossible. After remaining by a great effort of the will for ten minutes at the most, he can endure the distress no longer, but rushes out to cool himself, and after a few minutes' rest in a well ventilated gallery is himself again.

To understand the difference between the two cases, all we have to do is to compare the man's bodily temperature as he escapes exhausted from the hot working with that which he possesses while laboring in the

stoke-hole. In both instances there is excessive production of heat, and as we know from other experiments excessive discharge from the body of carbonic acid, but in the one the over-production is balanced by the surface cooling, in the other such cooling is impossible, the man's body itself receiving the overplus, which goes on accumulating until, if I may use the expression, he is warmed up into a fever, a fever which although transitory, yet so long as it lasts shows all the characteristics of the febrile state, the quick pulse, the muscular and nervous prostration, the increased temperature, and increased discharge of oxidized products.

The experiment I have been relating is a ready-made one, and may be called a rough one; it exemplifies the physiological fact that the excessive heat production which is determined by muscular exertion, if not compensated for by increased discharge, raises the bodily temperature and thus produces functional disorders which closely correspond to those of fever.

The same thing may be demonstrated with greater exactitude by experiments on animals. Nothing, *e.g.*, could be more striking by way of illustration of the heat-producing function of muscle than the comparison of the effect of the two well known poisons, curare and strychnia, on bodily temperature, curare by paralyzing the muscles, cooling the body so effectually that, as every experimenter knows, it is impossible, with the utmost precautions, to prevent the temperature from sinking; while, under the influence of strychnia, the heat produced is so much increased that the temperature rapidly rises to that of fever.

I trust that, after what has been said, it is scarcely necessary to observe that I am not drifting towards a new theory of pyrexia. My object is not to show that fever has its seat in muscle, but that any process by which vital activity can be increased in a relatively large mass of living tissue is capable of producing a pyrexia which is, in every respect, excepting its cause, a counterpart of that of fever. Of the bearing of this conclusion we can judge better if we put it into another form; for in other words it amounts to this, that pyrexia may be produced by any agent, whether originating in the nervous system, as in the case of the man working in the hot mine, or in the blood, as in the case of the animal poisoned by strychnia, which stimulates a great mass of living tissue to increased action. In this way we come back to a very old definition of fever, that fever is the reaction of the living organism against a stimulus. This definition is of value merely as a finger-post, as an indicator of the direction in which we must work. I understand it to mean that, if I am to seek successfully for the proximate cause of fever, I must look for it among agents which act either directly or indirectly as exciters or irritants of living tissue. Examples of indirect action I have already given. I now proceed to submit to your con-

sideration a third example, which I conceive to be one of direct action.

It has now come to be an extremely well-known fact in pathology that if the exudation liquids of certain acute inflammations are mixed even in extremely small quantity with the blood-stream, the inevitable result is the production of a pyrexia, which in its development, progress, and concomitant phenomena, so far as they have yet been studied, exhibits all the characters of the febrile state. I have no intention of entering at all into the consideration of this remarkable process, and refer to it here merely by way of illustration. I am altogether unable to state on what tissue mass the poison in question exercises its influence; all I want to do is to point out that whatever answer is eventually given by experiment to this question, the only possible conception that can be formed of its mode of action is that which regards it as a direct tissue stimulant.

#### Quaesita in Medical Science.

Dr. FRANCIS SIBSON sums up several inquiries which should be made:—

There are many important questions relating to disease and its treatment that are open to, indeed demand, inquiry, and I would here refer to a few of them. The amount of urea excreted during chorea, tetanus, fevers, and other diseases, and the relation that may subsist between the excretion of urea and the temperature of the body, are as yet but imperfectly ascertained. The mode of action of iron in increasing the red corpuscles is unknown. Can the crystalloid, iron, call to itself the colloid protein elements in such proportion as to form red corpuscles, when we know that the colloid is the energetic, the crystalloid the passive form of matter, and thus the crystalloid can diffuse itself through and depart from the colloid without altering its structure? The phosphates are largely given, and with great confidence in their good effects. Why? What is their mode of action? The phosphates come away rapidly from the broken-up tissues in certain diseases. I would repeat the question I have put with regard to iron: Can the passive crystalloid phosphate draw to itself the elements of the energetic colloid to replace the broken-up structures? Does the iron taken into the stomach diffuse itself passively through the tissues? In what way do antimony, arsenic, mercury, silver, and lead accumulate in the system? Do they diffuse themselves through the whole of the colloids? The action of the ergot of rye, of chloral, of quinine, of the bromide and iodide of potassium, of the potash salts, of the narcotics, and of many other drugs is as yet imperfectly ascertained. The influence of the cold bath, the wet sheet, the douche, wet sponging, and the local application of cold or heat on the temperature of the body calls for inquiry. The effects of certain kinds of food much employed in the sick-room are not yet known.



What is the effect on the frame of Liebig's essence of meat, which contains no protein element, not even albumen, which contains little besides the fragrance of meat, and nitrogenous compounds. The same question a little modified applies to beef-tea and chicken-broth. Is it right to give those liquids, charged as they are with nitrogenous compounds, to patients affected with Bright's disease, whose blood is already poisonously saturated with broken-up nitrogenous compounds?

These important practical questions call for careful, patient, and unbiased investigation. That investigation cannot be carried out without the aid of extensive self-recording instruments, accurate chemical apparatus, and other appliances.

#### Origin of Miasms.

Speaking of the introduction of germs, Prof. G. M. Humphrey says:—

Associated with this subject is that of the introduction of noxious agencies from without, and the various questions bearing upon it, such as the decomposition of fluids, the introduction, dissemination, and propagation of germs, and, I may add, their spontaneous generation. The importance of a fuller investigation of those subjects to the adopting of effectual means to prevent the spread of disease is sufficiently obvious. Some points appear to be clear.

First, it is pretty clear that air is the great, if not the only vehicle of these insidious agencies, whatever they are; and that the exclusion of air or the purification of air from them prevents the occurrence of their effects. To this exclusion of air in the one case, and its admission in the other, must be attributed the differences in the changes which follow a simple and a compound fracture, as also of a subcutaneous and a more free external incision. There can be little doubt that if air could be entirely excluded, the various serous and synovial cavities might be opened with comparative immunity, and operations could be performed, from the probable or certain danger of which we now wisely shrink. It is upon the purification of air from these agents, or germs as they are called, that the antiseptic treatment, so ably propounded by Professor Lister at a former meeting of this Association, rests its claim. Certainly, whether they are germs or not in the ordinary sense of the word, they are so inasmuch as they are the starters or initiators of a new series of changes in the fluids or solids of the body.

Secondly, it is clear that these influences operate with greatest rapidity and facility where vitality is lowered. In other words, the nutritive and other processes are most easily impressed and diverted in a new direction in persons and parts where they are least vigorously conducted. Where the tendency to a right direction is staggered or weakened, the tendency to a wrong direction is most easily given. A fainting or a

depressed body is well known to be a ready victim to poisonous and malarious agencies.

Closer observation of animal and vegetable life tells, more and more, of the prevalence of parasitic growth and of those lowered conditions which induce its excess. If a garden is blighted we know that it is so because the vigor of the trees is lowered by imperfect ventilation, frost, or some depressing cause. We recognize in it a mode of killing off some of the imperfect and overcrowded plants; and to apply these physiological principles to the case of man, we see that the maintenance of the vigor of the population by judicious sanitary measures is the only means of preventing an epidemic, and, at the same time, of preventing those evils which epidemics have the effect of correcting. We learn that, if it were in our power to stop epidemics by any mode, as by the institution of rigid quarantine, without attending to this point, we might, by so doing, effect more harm than good; forasmuch as we should incur the liability of engendering other, more insidious and perhaps more destructive maladies than those we attempt to ward off. Physiologically, the security of a country from invasion by epidemic and other maladies depends not on the rigor of its quarantine laws, but upon the efficiency of its sanitary enactments; just as, in a military point of view, security from foreign invasion and intestine commotion depends less upon bristling fortresses and strong ramparts than upon those laws which promote the energy and independence, and give scope to the physical, mental, and moral development of the people.

#### Position of America in Sanitary Science.

The following remarks were made by Mr. GEO. W. HASTINGS, Vice-President of the Section on Public Medicine:—

During last autumn and winter I was able to pay a visit to the Continent of America; and I need not say that I there met with many valuable experiences in several branches of political and social science, and I became acquainted with a few facts with regard to Public Health, which interested me greatly. I do not wish to flatter our American kinsmen, by telling you that in my belief they are advanced as far in sanitary science as we are in this country. I think it is very much the reverse. I believe that, at the present moment, England is far ahead of the United States in the practical administration of sanitary science; but at the same time I can bear most cordial witness to the great efforts that are now being made in America to bring up sanitary administration to a higher standard, and to the scientific investigations which are being carried on with respect to sanitary questions, and to the great zeal manifested by those engaged in the cause.

In New York I became acquainted with more than one circumstance which I desire to bring to your notice. There is one which may or may not be intimately connected



with the objects of this Section, but it is an institution which I think might be usefully imitated in this metropolis; and, assembled as the Association is in this great city of London, whence intellect and information spread naturally to all quarters of the kingdom, I think it may be well if any suggestions be made which will tend to improve either sanitary or hospital administration. I was very much struck by what is called the ambulance system established in connection with the New York hospitals. I went to what is called the Reception Hospital, near the bank of the river, and there saw the system at work. They keep in that and other hospitals six ambulances, each furnished with a horse, and with all surgical appliances in case of an accident, and in fact, supplied exactly as the ambulance would be if it were about to take the field with an army under active operations. A telegraph office in the Reception Hospital communicates with the police stations in every ward of the city, and wherever an accident happens a message is transmitted. While I was in the room a telegram arrived, and was written out in my presence, stating that a laborer had fallen from a scaffold and broken his leg. Within three minutes of its arrival I saw the ambulance start, furnished with all the appliances I have mentioned, in charge of a surgeon, who drove as fast as possible to the scene. Probably within a quarter of an hour after a telegram is received, a qualified surgeon with all the restoratives necessary is by the side of the man who had sustained an accident. He is placed carefully in the ambulance, in the best possible position with reference to his fractured limb, all necessary restoratives are at once applied, and he is taken to the hospital best fitted to his case, or which is nearest, or, if he wish it, to his own home. I found that, during the then preceding year, 1401 patients had been succored by means of the ambulances from the hospitals, of whom 1066 had been helped in consequence of telegrams received from police stations. I was also told there were upwards of seventy cases, which in the opinion of the surgeons would have been fatal if they had not been speedily succored, but in which, owing to the help rendered them, the sufferers lived to be removed to the hospital, and afterwards recovered under the care of the hospital surgeon. I venture to suggest, whether in this great city, looking to the resources of our hospitals, it might not be possible to organize such an ambulance system, so as to secure the assistance of a qualified surgeon as promptly as possible to any accident within the bounds of the metropolis.

#### Development of the Ovum.

In the Lecture on Obstetric Medicine Dr. J. BRAXTON HICKS gave the following sketch of progress:—

Within the last few years the opinions as to the development of the ova and Graafian follicles have undergone much change. So

long ago as 1859, Pflüger published in a paper, "*Ueber die Bewegungen der Ovarien*," in Reichart and Du Bois Reymond's *Archiv*, an opinion that the Graafian follicle originated in tubes, and he pointed out therein the analogy to the seminal tubes of the testis, and that these were formed in the stroma, and continued to do so even after the birth of the fetus. In near accordance with this view is Köllike's; and more recently, Waldeyer in a work, "*Eierstock und Ei*" (1870), and still later, in an article in Stricker's *Histology*, while agreeing as to the tubular origin of the Graafian follicles, has pointed out that these tubes are formed by the inflection of the surface of the ovary by the growth of the stroma around; that the ovary is covered by columnar epithelium, and not by tessellated epithelium, as is the case in serous membranes; and that this epithelium lines the inflection throughout. He then points out that among the epithelium from very early life (four days in the chick), there are enlarged epithelium cells, and these are drawn into the inflected portion, and ultimately become the ova. He says that the ordinary epithelium cells about these large cells arrange themselves so as to surround them, and form not the Graafian follicle, but the outer membrane of the ovum or zona pellucida. Where there are many of the large cells, the tube separates up into as many ova, and these become so many centres of Graafian follicles. Waldeyer further says, that in all animals the ova seem to be simply more highly developed epithelial cells of the ovary, which have undergone some peculiar modification, so that the follicular epithelium and the egg-cells stand in direct genetic relation to each other. Waldeyer's account is generally well received, though hardly sufficient time has elapsed to give confirmation or refutation to his opinion.

One is tempted here to ask whether these cells have any more direct and immediate descent from the protoplasmic matter of the ovum which has only itself just started into life. It is only a few hours since it assumed activity, and at once it multiplies certain cells, which it stores up, and which endure without renovation till required for reproduction. Are these immediate descendants of the mother ovum, or are they, like the other cells of the body, differentiated off by the general laws which cause this also wonderful phenomenon? One is tempted also to remark upon the force which is evoked by the fusion of the male and female elements. It may ultimately prove to be simply chemical; in any case, it is the highest example of what we may still, for the want of a better name, call vital force. And it has this peculiar property, that the product of the fusion not only holds the force within itself, but upon the tissues on which it rests it acts as a powerful stimulant, and that not tending to its destruction, but enduing it with an increased vitality, whereby each elementary tissue is increased and multiplied.

#### The Mucous Membrane of the Uterus.

Before, during, and after menstruation has been studied by Kundrat:—

He describes the ordinary characters of the mucous surface as markedly altered at the monthly period of uterine activity; it is swollen, thick, and loose, and almost diffuent, covered with a whitish or bloody mucus, freely injected in parts, and in many cases uniformly colored of a deep red. A microscopical examination reveals increased abundance of the cellular matrix, with great elongation and dilatation of the glands. But what he especially points out is that the condition of the uterus just described probably precedes the occurrence of the discharge of the ovum, and, what is perhaps more striking, the menstrual flow, by several days. The uterus appears prepared for the receipt of the ovum a certain time before the rupture of the Graafian vesicle. At the menstrual flow, and for a short time after it has ceased, careful examination shows a remarkable change in the microscopical appearances. The cells of the stroma and the vessels, as well as of the epithelium of the glands and surface, are dull in appearance, and filled with fat granules. Kundrat believes that the hemorrhage does not cause the fatty change, but is caused by it. The anatomical sequence of events is the swelling of the mucosa, fatty change in the cells and vessels, vascular rupture and hemorrhage. The type of the impregnated uterus is seen in the active uterus when the mucosa is swollen and menstruation has not yet commenced. If the bleeding does commence, it is a sign that the ovum has perished, and that the mucosa is returning to its state of rest. According to this view, a developing ovum or growing embryo belongs, not to a menstrual period just passed, but to one just prevented by fecundation.

#### The Forces of Labor.

One of the most important questions in obstetric physiology under discussion of late, has been that of the forces employed in labor. Many have raised the question, as, for instance, Haller, and Lithopædus Scrive-rensis, quoted by Swift in his *Tale of a Tub*. Both these placed the force at a high point, the latter, indeed, at 400 lbs. The question, however, remained latterly in abeyance, until Dr. Matthews Duncan, and, at the same time and independently, Poppel, of Muntch, carried out numerous experiments on the power required to burst the membranes. Dr. Duncan found the toughest membrane of an easy labor to require 29 lbs. for an os uteri of four and a half inches; Poppel, 19 lbs. for an os uteri of four inches. Two or three years after these experiments, Professor Haughton calculated that the full force of the uterus itself was about 52 lbs. on an os uteri of four and a half inches, calculating from the area of the uterus, the thickness of its walls and its curvature. Having obtained this result, he argues that, as nature does not employ

more power than is required, the resistance of labor is only somewhat below this. But, in calculating the force of the accessory powers, he came to the conclusion that they were far in excess of that of the uterus, equal, indeed, to 523 lbs. on the area of four inches and a half diameter; that is, for the maximum power exerted. It would be out of place to go into the calculations, but I may say that he took two bases of calculation; one, the weight of a mass of given size, capable of being lifted on the centre abdomen, and then calculating for the whole area; and, the other, the thickness, area, and curvature of the abdominal muscles. He assumes that the uterus itself does no more than rupture the membranes, and that the auxiliary forces do the major portion of the remainder.

It is evident that, before this important point is thoroughly cleared up, some further experiments must be made; because, I think, most persons accustomed to operative midwifery would find it difficult to acknowledge that a force equal to a quarter of a ton can be, in even the most forcible labor, put on the parturient passage. Either some loss of force takes place, or else Professor Haughton has overstated the strength of the muscular tissue of the uterus and the auxiliary forces. No doubt, where the waters have escaped, the pressure is not so direct nor so great as when plenty of fluid is present, because a considerable amount of force is exerted laterally against the body of the child; and we know that, in some forms of labor, although the uterus is acting most violently, the effect on the foetal head, *quoad* descent, is next to nothing, the whole force being exhausted in compressing the child, to its great detriment. Again, although in easy labors the contractions of the body and fundus take place universally on the contents, yet those who believe in the peristaltic nature of the contraction will see that the whole of the uterus is not engaged in the action at any one time, and that something must be taken off its total force when considering its expulsive power.

#### Determining the Size and Sex of the Fœtus in Utero.

In conclusion, let me mention that investigations have been carried out with a view to determine the size of the fœtus, and also the sex of fœtus in utero. Ahfeld, of Leipsic, has attempted to ascertain the size of the child, in order to calculate the period of gestation, and more especially to make out before labor if any disproportion exists between the fœtus and the genital passage. He pays special attention to the size of the head, the hardness of the bones which form it, and the condition of the sutures and fontanelles. The patient being placed on the back, with the thighs flexed, if the long axis of the uterus be from above down, the position of the fundus uteri is marked on the abdomen, and then one arm of Baudelocque's pelvimeter is guided by the finger along the vagina to the occiput of the child. The

length from head to breech is thus ascertained, and by doubling this we have the entire length of the child. Ahfeld has collected the results of measurements made in two hundred and fifty cases, and gives much interesting information. In one of the tables which he gives, the relation between the length of the child and the two transverse diameters of the head is recorded. So far as these investigations go they are very valuable.

The interesting fact that the sex of the child can in a large proportion of cases be ascertained by auscultation during pregnancy has also lately been made known. When the foetal pulsations number 144 per minute, the child is probably a female, when they are 124 per minute, probably a male. It is said that a little variation from 124 upward, and from 141 downward, will not alter the diagnosis, provided auscultation be practiced towards the end of pregnancy. Steinbach was correct in forty-five out of fifty-seven cases which he examined, while Frankenhäuser was right in all the fifty cases which he examined with a view to determine the sex of the child.

#### A Peculiar form of Dysmenorrhœa.

Dr. GEORGE H. KIDD, Vice-President of the Obstetrical Section, calls attention to an unnoted form of dysmenorrhœa. Having sketched the general history of the disease, he proceeds:—

I have thus sketched the history of dysmenorrhœa caused by obstruction to the exit of the menstrual fluid, chiefly from the facts recorded in my own case-books. From the same source I have now to describe another form of the disease, one in which the symptoms are so different that it is impossible they can depend on the same condition. In these cases the disease, instead of being usually congenital, is always acquired. It may be in early girlhood, or it may be after having given birth to several children. In one case the patient had been married eighteen years and had no family. "While at school, through neglect," she said, "uterine disorder commenced, and has continued without intermission ever since." In another case, the patient had been married six years; she had had two children, the youngest nearly four years old. She had not nursed either. She had never recovered thoroughly after the birth of her last child, but it was only within the last year menstruation became painful. In another, the disease set in after the birth of her third child. The patient became pregnant a fourth time, and nursed this child three months; but she was in bad health all the time of her pregnancy and while nursing. When menstruation returned, after weaning the child, it was as painful as ever. In many cases, the disease supervenes on the mechanical dysmenorrhœa, but the symptoms are so different that the patient can herself tell when this took place.

In the former group of cases, the pain

commences simultaneously with the discharge or after it has appeared. In this the pain begins a week or ten days, or more, before menstruation, and at the same time that the pains occur in the pelvic region the breasts become painful, hot, swelled, and tender to the touch. The pelvic pains are spoken of as dull, achy pains; they are felt in the pelvic region, and extend down the thighs to the back. They are not the acute paroxysms of pain of the former cases; they are aggravated when menstruation actually begins, and often continue throughout the whole period, but more frequently are relieved as soon as the discharge is established. They then cease, and return on, it may be, the fourteenth day; that is, at the middle of the interval. This "intermediate pain," as Dr. Priestley calls it, may last only a few days, or it may continue and increase in severity till the next menstruation, the only interval of ease being for the first ten or twelve days after menstruation.

Menstruation in these cases is often irregular, generally retarded; sometimes it comes too soon, and in some cases a whole month may be passed over, but the pain occurs when the menstruation is due, even though the discharge does not appear.

The discharge is generally scanty, but sometimes it is excessive. Its appearance is almost always preceded or followed by severe headache, often by vomiting, and, during its flow, palpitation is often complained of, also frequent micturition, and sometimes tenesmus and kneading in the rectum.

Miss H. states that menstruation has always been painful during the first two or three hours, but for the last two or three years she has suffered very much from pain for a week before menstruation begins, and at the same time her breasts have also become very painful. She has had much palpitation lately, and severe headaches before menstruation begins.

Mrs. W., married seven years, no children, states that menstruation was always painful at the beginning, but, since marriage, she has suffered for a week before it begins, from pain round the sides, stomach, and back, and from pain in her breasts, which become swollen. About five years ago the os uteri was slit, after which she became pregnant, but aborted at the end of the third month. The painful menstruation continues, notwithstanding the operation and pregnancy. These were cases in which the form of dysmenorrhœa, of which I now speak, supervened on that due to obstruction; on examination, in this latter case, the uterus was found normal in position and size. The os and cervix were quite healthy, but the os was very open in consequence of the operation that had been performed on it. The right ovary, however, was found to be swollen, and very tender to the touch.

In many cases, in addition to the symptoms already described, there is a constant dull, aching, sickening pain in the back; and there is so much pain *in coitu*, that all attempts at intercourse have to be given up.



Mrs. C. has been married ten years, and has no family. For many years she has had painful menstruation, the pain beginning more than a week beforehand. The os uteri was twice slit, without in any way relieving the pain of menstruation. She has also had the orifice of the vagina dilated, for the pain *in coitu*, but without benefit. On examination, the vagina admitted a full-sized speculum with ease; there was no contraction or spasm at the orifice. The uterus was found with the cervix slit, but otherwise healthy, and the right ovary was found lying in Douglas' space, somewhat enlarged and tender to the touch, the pain, on pressure on it, being of the same character as that caused by intercourse.

#### The Non-restraint System in Insanity.

In the address of Dr. T. H. TUKE, president of the section on psychology, the following remarks occur:—

In 1839, Dr. Conolly, whose attention had been much directed to the experiments of Gardiner Hill, was appointed resident physician at the County Asylum at Hanwell; in his report for 1840, he publicly announced that in that large institution mechanical restraint had been found unnecessary, and was entirely and absolutely abolished! A new era in the treatment of insanity had commenced; the very type of the malady seemed to be changed; fearful raving, desperate struggling, and maniacal excitement, heretofore the ordinary symptoms of mental disease, were now seldom seen; gentleness and kindness were shown to be not only possible, but essential to the proper management of the malady. Under this system, the aspect and demeanor of the patients became so altered, that a foreign physician, visiting the asylum, after seeing all its inmates, gravely inquired, "where it was the real lunatics were confined."

The great success of the "non-restraint system," as it came to be called, in not only rendering insanity a less painful malady, but in conducing to the restoration of reason, had one disadvantage; absorbed in his beneficent work, Dr. Conolly, although an accomplished physician, somewhat neglected medicine. He was so perfectly a master in the art of moral management, and found it so often sufficient, that by him, and to a great extent by his school, the use of drugs was abandoned, or became restricted to a few simple remedies.

Dr. Conolly was one of the founders of this great Association. Many whom I now address must well remember his ever kind and courteous manner, his evidently consummate knowledge of his subject, and the fervid eloquence with which he advocated the beneficent system to which his life was devoted. I was myself his pupil, and it is with no irreverence that I venture to dispute an opinion of one so much loved and honored. But the time is coming when the medical treatment of insanity should assume its proper place; without it, psychology is not a

science but an art—we are nurses and not physicians; a wider study of pathology, an increased knowledge of the effect of remedies upon the organism, and a higher standard of education among those specially engaged in treating mental disease, has led to the recognition of the paramount importance of prompt and judicious medical treatment. At the same time, our obligations to the great advocate of non-restraint are none the less; and no physician, however able, can forget those essential principles of gentleness and forbearance in the treatment of the insane, which are so earnestly inculcated by Dr. Conolly.

#### The Medical Treatment of the Insane.

The improvement in the medical treatment of the insane has also a definite history and a recent origin. In 1845, and in subsequent years, Lord Shaftesbury and the Commissioners in Lunacy were instrumental in passing through Parliament several bills for the benefit of the lunatic poor, especially one providing for their treatment in county asylums, and placing them under the charge of qualified resident physicians. Hence arose a new race of practitioners, carefully trained and selected, and anxious to raise the character and increase the usefulness of their respective institutions. Accepting entirely the doctrine of "non-restraint," there has been no new remedy or method of treatment that has not received due attention and trial from the medical officers of these asylums. In 1841 the *Journal of Mental Science* was suggested and commenced by Dr. Bucknill. Its pages, and those in other periodicals, and the annual medical reports presented to the Committees of each asylum, attest the zeal and talent of their officers, especially in relation to therapeutics, and a still more satisfactory proof, the report of the Commissioners in Lunacy, demonstrates that a very high and increased rate of cure has been attained.

The treatment of mental disease in private practice has improved in a still greater degree. The Commissioners in Lunacy report that the number of insane in private asylums has diminished, and although the absolute number of the insane has increased, and must still increase, it is among the poorer classes only. The table before you, taken from the last report of the Commissioner, shows that while the ratio of increase in the insane population generally has been from 1.97 per thousand in 1861 to 2.49 in 1871, the increase in the pauper class has been from 3.61 to 5.98 per thousand, during the same period.

I think I do not err in ascribing this great improvement to the more general knowledge of insanity as a disease, and its better medical treatment. While it was considered an inscrutable malady, requiring recondite knowledge and peculiar methods of healing, special physicians were sought for, and were, indeed, indispensable; but since the relation between the body and the mind has been



better understood, and mental affections are recognized to be nervous disorders, as amenable to treatment as any other corporeal malady, psychical medicine has ceased to be the sole province of a class; the educated practitioner is now more or less acquainted with affections of the brain, and the physician engaged in the care of the insane must be well trained in general medicine.

## REVIEWS AND BOOK NOTICES.

### NOTES ON CURRENT MEDICAL LITERATURE.

—We have received from the author, "La Pinzetta Stafilorafica inventata e prodatta dal Professore Cavaliere Gaetano Giovannini di Bologna," a description of a new pincette in the operation of staphyloraphy. A cut and description of it is given on page fourteen. It is a modification of that used by Sotteau and Colombat, but arranged so as to be held in the hands somewhat more conveniently.

—Dr. Wm. B. Nestel, of New York, has had his instructive *Clinical Notes on Nervous Diseases of Women*, originally published in the *Archives of Scientific and Practical Medicine*, reprinted by G. P. Putnam's Sons, New York City.

—"The Peninsular Journal of Medicine" has reappeared in Detroit, commencing with July, 1873. Dr. HENRY F. LYSER is editor. It has a number of useful papers, and the editorial arrangement is judicious.

—The Therapeutic Effects and Uses of Mercury, is a carefully worked up article by Dr. W. H. Doughty, Professor of Materia Medica in the Medical College of Georgia. W. R. Barrow, Atlanta.

—Tetanus and Tetanoid Affections, with Cases, by Dr. B. Roemer, of St. Louis, devotes 96 pages to a very close analysis of the pathological phenomena in this important and obscure class of nervous diseases.

—Dr. W. K. BOWLING has written a valuable "Account of the Cholera as It Appeared in Nashville in the Year 1873," which deserves both reading and preservation.

—Hints on School Education and Discipline. By H. Y. LAUDERBACH.

### BOOK NOTICES.

Skin Diseases: their Description, Pathology, Diagnosis, and Treatment. By TILBURY

FOX, M. D., London, etc. Second American from third London edition, rewritten and enlarged. With a cutaneous pharmacopoeia, a glossarial index, and sixty-seven additional illustrations. New York: Wm. Wood & Co., 1873. 1 vol., cloth, 8vo, pp. 532.

Dr. Fox's manual has had an unusual, and a well-deserved sale in this country and in England. His vast experience in London, and the practical direct method of treatment he adopts, recommend his work to those who want a guide, safe and sufficiently extended, but not burdened with the cumbrous phraseology and useless refinements of many writers on the subject.

To meet this demand in its fullest extent, Dr. Fox has carefully revised this third edition, rewritten most of it, and in fact makes it "practically a new book."

The illustrations of dermic pathology are carefully drawn and engraved with fidelity. Free use has been made in this department of the labors of Dr. Neumann, of Vienna. The manner in which the work is laid before the American public is creditable to the publishers, and doubtless it will be received with marked favor.

On Yeast, Protoplasm, and the Germ Theory. By THOMAS H. HUXLEY, F. R. S.

The Relations Between Matter and Force. By Prof. JOHN H. TICE. Price 25 cents.

These two interesting lectures make up No. 8 of the *Half-Hour Recreations in Popular Sciences*, published by Estes & Lauriat, Boston (for sale in this city by J. B. Lippincott & Co.).

Both these articles are entertaining in style, and embody some of the most important results of modern investigations. The American author, Prof. TICE, of St. Louis, advances the theory of "Constitutive Force" as the pervading quality (or is it substance?) which fills the interplanetary spaces and gives to all existence its character of individual being. We do not think he has stated with sufficient clearness the relation of constitutive to active force, and we should like to see this important part of his argument considerably amplified. Nor does he so fully state, as we would wish, the relations of what he calls *constitutism* to correlation. It is because we have felt so deeply interested in his speculations that we allow ourselves these suggestions.

## MEDICAL AND SURGICAL REPORTER.

PHILADELPHIA, SEPT. 27, 1873.

S. W. BUTLER, M. D., D. G. BRINTON, M. D., Editors.

Medical Societies and Clinical Reports, Notes and Observations, Foreign and Domestic Correspondence, News, etc., etc., of general medical interest, are respectfully solicited.

Articles of special importance, such especially as require original experimental research, analysis, or observation, will be liberally paid for.

To insure publication, articles must be *practical, brief as possible to do justice to the subject, and carefully prepared*, so as to require little revision.

Subscribers are requested to forward to us copies of newspapers containing reports of Medical Society meetings, or other items of special medical interest.

We particularly value the practical experience of country practitioners, many of whom possess a fund of information that rightfully belongs to the profession.

The Proprietor and Editors disclaim all responsibility for statements made over the names of correspondents.

## THE OBSCURANTIST DOCTRINE AGAIN.

In these days, when the most eminent investigators of all countries take a pride in bringing their profoundest results to the knowledge of the public in popular lectures and magazine articles, it is curious to note how a certain set of men, *not* the most eminent, and yet holding positions of honorable distinction, seek to defend the ancient doctrine of *obscurantism*—of the superiority of ignorance to knowledge.

In no profession is this more conspicuous than in our own; and in none is the partial success of the obscurantists more to be deplored. All great reforms must come from enlightening the masses; and the narrowness of those who think the truth on *any* subject, when properly presented, is injurious, can only arise from a lack of sociological knowledge. Those views are, we feel certain, rapidly disappearing, and we intend to aid in their disappearance on any and every occasion.

One such presents itself just now in the Annual Discourse before the Massachusetts Medical Society, delivered by Dr. CHARLES E. BUCKINGHAM, Professor of Midwifery and Medical Jurisprudence in Harvard Uni-

versity. The subject of the discourse is, "The Proper Treatment of Children, Medical or Medicinal." Against its matter we have at present nothing to object; the views advocated on infant nourishment are well founded in many respects, though there is no dogmatic law which applies to all children alike, under all circumstances.

But at the close of the address, Dr. BUCKINGHAM, whom we once knew to state that he had an "instinctive aversion" to all books on popular medical instruction, gives expression to that instinct in the following words:—

"There is a penny wise and pound foolish way, in many families, of consulting popular treatises on medicinal treatment; and the more the mother reads, the more doubtful she grows, the more miserable the infant becomes, the more frequently the treatment is changed, the more the necessity arises of sending for the doctor. Oh! the misery, when sick, of knowing anything of ourselves; the misfortune of ever having heard of ulcerated Peyer's patches, of having the knowledge that one has a lung, a stomach, a pancreas, a pineal gland; the suffering from the recollection of how little chloral hydrate killed one man, and the memory of Christison's statement of the very small dose of opium that was fatal in a particular case! And is it strange that, since Buchan is out of date, and the more modern treatise is to be frequently found on the sitting-room table, bearing a surname which so many of us early learned to respect, and which is supposed by many of the public to be his work; is it strange, in the confused and plethorically illustrated medley of no less than three systems of medicinal treatment, that the poor and ignorant mother, who wishes to save expense, hurries her nursing child into its coffin?

"The day may be approaching when popular treatises upon medicine and physiology will be of occasional value, but I doubt whether they will ever be of any more service to the world than popular treatises upon watch-making or the building of locomotives. It may be that some ignorant neighbor's prescription may be lived through, and some tough child may escape the normal consequences of a cold bath administered according to popular rules.

"The case is by no means unknown, in which a shot through the head did not destroy the intellect; and a bullet through the chest has been followed only by a bloody expectoration. The evidence in favor of popular treatises upon medicine is equally strong with that upon the harmlessness of bullets. And the evidence amounts to this, they do not always kill."

This smartness of the orator may have imposed on some whose own ideas were already in his favor, or partook of the obscurity which the speaker wished to diffuse.

The confounding some of the later and admirable treatises on popular sanitation and the general management of disease with the old books, such as Buchan, Warren, etc., is a deliberate fallacy in reasoning, as discreditable to the speaker as it is untrue in fact. It is precisely because the public eagerly crave knowledge on the great subjects of health, the preservation of life, and the home treatment, that is, the correct nursing of disease, and because if the better class of professional writers refuse to satisfy this craving such miserable treatises as those of Buchan, Warren and Gunn are sold by the hundred thousand; we say, it is just because this is so, that we determinately advocate the composition and dissemination of sound works on these branches.

We have, moreover, the gratification of seeing that our views are every year becoming more and more those of the medical profession in France, England, Germany, and our own land.

In all these countries we could refer to names eminent in technical literature which are also connected with admirable popular treatises on professional subjects. Those who pretend to despise the dissemination of knowledge on any ground put themselves back to the Dark Ages, and are like Giant Pagan in *Pilgrim's Progress*, who "does little more than sit in his cave's mouth, grinning at pilgrims as they go by, and biting his nails because he cannot come at them."

## NOTES AND COMMENTS.

### Localization of Faculties in the Brain.

Some interesting researches of Dr. H. Jackson and Dr. Ferrier point to the localization of certain groups or combinations of voluntary movements in certain parts of the surface of the brain, and particularly in the convolutions of the hemispheres. From the clinical observation carried on for many years of cases of paralysis and convulsion, in which in the one class of cases abnormal movements of certain groups of voluntary muscles, in the other class absence of movement, were found, after death, to be associated with topographically well-defined lesions of the convolutions, Dr. Jackson had reasoned out the physiological relation between the injured parts and the combined movements which, in some way or other, they controlled or influenced. Following out the principle thus deduced from clinical observation, Dr. Ferrier was led to undertake the very extended and laborious experimental investigation of the motor functions of the brain, of which some of us have seen the results. Compared with that employed in the research last referred to, Dr. Ferrier's method of experiment is simple. It consists simply in exposing the brain of an animal and directly exciting different parts of the surface by induction currents and observing the combined movements which are thus induced. The result is this; that definitely combined and purposive movements of the extremities, of the muscles of expression, of mastication, of the tongue, of the eye, and so forth, are determined by excitation of particular parts of the brain surface, and that these motor regions are so limited from each other that although the spot which rules over one movement may be very close indeed to the spot which rules over another, there is no difficulty in defining the topographical relations, or in throwing one into action without affecting the other. What happens when a convulsion is excited electrically? It would be premature to attempt to give an answer to this question. In these facts there is nothing subversive of the notion usually entertained, that these superficial parts of the hemispheres are not, in the physiological sense, *motor centres*, i.e., not centres from which the channels for motor impulses spring, but that they are the seats of thought,

the organs in which the "procession of ideas" of which thought consists goes on. If this is true it is very natural to suppose that when we excite those organs the effect must be to induce thoughts, dreams, fancies. Of these no doubt some, perhaps the greater number, find no visible expression (Dr. Ferrier finds that there are regions of great extent where excitation does not lead to movement), others, being congenitally or by habit associated with movements, act on the centres of movement situated in the central parts of the brain, and produce their visible effects reflexly, just as excitation of the retina by light determines contraction of the pupil, or as excitation of the organ of smell determines sneezing.

#### Precautions in the Use of Chloral.

Dr. DONOVAN calls attention, in the *Medical Press and Circular*, to some dangers from chloral. He refers especially to "its dangerous effect when administered to patients laboring under acute pulmonary diseases, such as pneumonia, bronchitis, and all diseases whose tendency is to retard respiration. I have, I regret to say, seen not necessarily fatal cases of pneumonia become hopeless after an ordinary dose of this death-producing hobby-horse of modern medicine.

"The first case in which I used it was that of a stout, well-nourished man, of about 25, who was suffering from extreme asthma and insomnia of pneumonia. Its effect on him was quite enough to warn me of its dangers; his wife and himself made me promise on my next visit not to give him any more of that stuff, as it was near killing him. He said that a very short time after taking it he lost all consciousness, and suffered from a kind of frightful nightmare, his wife stating that he was raving and muttering all night; when I saw him next morning he was in a state of complete prostration, his powerful constitution alone bringing him through.

"The second and last time it was administered to a patient of mine by a medical man of long standing and large practice, whom I met in consultation, and whose antiquity carried the day against my comparatively juvenile ideas. It was about eight or ten days after her confinement, which had been a dangerous one, when she was attacked with pneumonia; and, against my wish, received a twenty-five grain dose of chloral; the consequence was, what I had expected,

in a short time after taking it she sank into a state of low muttering delirium, from which she woke with the death rattles in the throat."

#### Impotence.

Dr. EMIL DUVAL mentions (*Gazette M. de Paris*) a case of spermatorrhœa and impotence in a young man aged twenty-one, who had been a masturbator, and who had suffered from a severe attack of melancholy, for which he sought refuge again in masturbation.

He was pale, thin, and remarked emissions continually. There was pain in the loins and weakness in the feet, with headache, weakness of intellect, and melancholia, loss of voice, with sleeplessness, diurnal loss of semen, and nocturnal also.

He was treated by ablutions of water at 24° C. mornings and evenings, and the forenoon to a sitz bath for fifteen minutes. Short walks and the use of cold water were enjoined.

In a short time the temperature of the water was lowered to 20° C., and then to 15°. Lastly, in place of the evening abluion, a shower-bath of twenty minutes' duration was substituted, together with a douche for one minute over the whole back and loins. The front of the body, also the parts above the symphysis, and the internal aspects of the thighs were also treated with the douche.

Next an entire cold bath was ordered for three minutes after the shower-bath. Continuance in this treatment for three months produced a perfect cure. The nourishment and intellect became excellent, and the pollutions and spermatorrhœa left off.

#### Treatment of Diphtheria.

Dr. KUHN, of Berlin, regards diphtheria as of fungus origin, and he endeavors "so to modify the nutrition of the mucous membranes" that they will be unfavorable to the growth of this fungus; this he proposes to do by the use of strong alkaline solutions. He gives fifteen to thirty grains daily of carbonate of potash to a child under three years, and so on in proportion to age.

#### Burns.

Glycerite of lime used in burns is said by De Breyne to soothe the pain and to prevent inflammation or diminish its intensity; it is prepared from recently slaked lime, one part; glycerin, fifty parts; chlorinated hydrochloric ether, one part.



## NEWS AND MISCELLANY.

## Address of Professor Virchow.

The great German pathologist was a guest at the recent meeting of the British Medical Association. In an address he delivered he said:—

Is it correct, is it a thing of public necessity, to advance in the path of experiment and of research, and to induce the profession to bring their practical theories into strong connection with the theoretical views of modern science? In my country this question is answered in the affirmative sense. I myself commenced the struggle when, twenty-five years ago, I began my *Archives* of pathological anatomy and physiology, and of clinical medicine, and when I proved the postulate that clinical medicine should be applied to practical physiology. The victory of this tendency was confirmed when, in 1856, the Prussian Government took the decision to found the first pathological institute. Since that time, each year has brought new proofs of the correctness of this way. In all civilized countries this science has followed the same course; and if now the English Government and the English profession agree to found large pathological institutes, what they do is nothing else than to accomplish that national tendency originated by those two most illustrious members of the College of Physicians and of the College of Surgeons, William Harvey and John Hunter. Each pathological institute in the world is a monument erected to the memory of those two heroes of science; and, gentlemen, I believe, if no other reason existed, it should be a duty of gratitude to establish that sort of institute, where their method could be pursued and transmitted to the coming generation. But I am somewhat surprised that such a question should be discussed, and the answer be doubtful, in the country which, for many centuries, has given to the whole world the highest representatives of that successful combination of medical or surgical practice and theoretical speculation. May I be allowed to recall at this time, and in this place, the memory of that man who, after my opinion, is forever the best example of what a correct method and an intrepid philosophical sense can attain, I mean the memory of Glisson. He has shown what calm and diligent observation produces in the investigations of the most dark points of practical medicine, when based upon good anatomical knowledge. But the same Glisson, who seemed to be a mere empirist, employed the most earnest efforts for finding a general formula for the phenomena of life; and it was by following in his footsteps that Haller came to the doctrine of irritability, the fundamental thesis of modern biology. We also, in prosecuting the so-called physiological theory, are in the way of Glisson, in the way of good practice. The scientific man, whether he be a practical man or not, analyzes, diagnoses, divides the phenomena of life. In this way

he arrives very soon at an apparently distinctive result. The unity of life, the unity of disease, however, is destroyed. So in the theory of fever we find no resemblance between the modern and generally accepted view of fever dependent on various local and general influences, and the former doctrine of essential fever, placed in each system of older medicine as the head of the special diseases. What is inflammatory fever now, and what was it forty years ago? Now we know that pneumonia is a local affection, developing itself in a regular series of stages. But these stages do not correspond to the stages of fever concomitant and excited by that local affection. Nay, the fever can cease; the disease, considered as a unity, can be finished by a larger crisis; but the local affection is not always finished, it can make further progress, and it can persist by a series of dangerous metamorphoses. The old unitarian doctrine could not give any explanation of these particulars. We observe that pneumonia is a local affection, proceeding ordinarily from lobule to lobule; and, if we look upon the inflamed lung of a man who has died in the stage of acme, we see in the same way, placed side by side, all the different stages of local development. Thus the fever makes its way, and the local affection makes its way; and sometimes we find the local affection without fever, or with only a very insignificant fever. But also the local affection is not a single one. Each affected lobule, each affected lung-cell, presents its particular and independent affection. Should the practical man not recognize these compound things? Should he continue to contemplate the disease as a unity, only because the patient is an individual? No, gentlemen, disease is a unity only in an elementary organism, in a cell. It is always a compound phenomenon in a higher, in a compounded organism; and nobody will have a perfect knowledge of disease if he be not enabled to divide the disease into its elementary components. This is shown by that branch of medical science which has now reached the highest degree of scientific surety, ophthalmology, whose methods make it possible to fix real elementary pathological alterations, and their continuation to compound diseases. So, gentlemen, will the physiologist divide the so-called fever into a series of elementary processes.

## Anecdote of Nelaton.

A medical writer tells the following little story of the great French surgeon, Nélaton. Speaking of a visit to one of the Paris hospitals, he says:—"As we passed into the hall we heard groans, evidently of a child in great pain. The door leading to the sick ward was ajar, and as we approached we heard the voice of a man talking earnestly with a little sufferer. There was something very affecting in the imploring tones of the child's voice and the tender and sympathizing replies of the physician, and it seemed to us no breach of etiquette to

witness unseen through the crack of the half open door the scene that was passing within. On a narrow pallet near the window lay a fine boy, nine or ten years old, dying of cancer developing itself between the eyes and behind the nose. It had not shown itself externally, but had destroyed the sight, and was attended with excruciating suffering. By his side sat a stately white-haired man holding with one hand the two of the little patient, while with the other he caressingly smoothed his hair. The child told the story of his pain, '*Ah je souffre tant!*' to which the old man listened patiently, promising to devise some relief. Then he rose to go, but first bent over the boy, and with tears dropping from his eyes, kissed his forehead as lovingly as a mother. The white haired man was the world renowned Nélaton, lately summoned to attend the fallen Emperor."

#### Various Theories.

After the meeting of the American Association for the advancement of science, "Section 2" went in for a little fun. One member, remarking on the frequency with which naturalists were mistaken in their first impressions, approached the blackboard and drew a fragment of bone, which, he said, a friend, a naturalist, had reconstructed an animal from. The reconstruction was effected on the blackboard, and something like a terrific totem was the result. Meanwhile, he described the bones and parts as he added them, drawing and speaking at the same moment. Then he suggested certain anatomical objections and possible improvements, which produced an amusing change in the figure. Finally, he said, they concluded to restore the fragments on a different hypothesis. The fragment was drawn again, and in an instant a few strokes drawn additionally revealed its true character. It was the handle of a jug.

There is a wise lesson in that joke.

#### Medicines Subject to Stamp Tax.

In a letter to Supervisor Alex. P. Tutton, of Philadelphia, the Commissioner of Internal Revenue states that "medicines and medicinal preparations, to be exempt from the stamp tax, must not be patent or proprietary. They must not be put up in a style or manner similar to that of patent or proprietary medicines. They must not be advertised as having any special proprietary claim to merit, etc. They must not be sold or offered for sale, or advertised under any other name, form or guise than that demonstrated and laid down in the authorized published medical works or journals.

Whoever departs from these plain and simple rules in making, preparing, recommending to the public, and vending, or offering or exposing his medicines, etc., for sale, has no claim under the law to exemption from the stamp tax.

#### Water of All Flowers.

An ancient formulary of the seventeenth century has this prescription which was to produce a "Water of All Flowers" (*Aqua Florum Omnium*). The process adopted is remarkable for its simplicity and logical accuracy.

"Send a cow into a meadow full of flowers; when she has eaten all the flowers gather the dung, distill it, and you have water of all flowers."

#### Return.

Dr. J. SOLIS COHEN, one of the recent delegates of the American Medical Association to the British Medical Association, has returned to the city.

—The court has appointed Dr. Samuel Ashurst a member of the Board of Health of this city, to serve until July, 1876, in place of Dr. Franklin D. Castle, resigned.

—Hon. Daniel Sturgeon, M.D., ex-United States Senator from Pennsylvania, resides in Uniontown, Pa.; he is in the 84th year of his age.

#### MARRIAGES.

GASTON-BROWN.—At the residence of the bride's father, on the 23th of August, 1873, by the Rev. J. R. Gibson, assisted by the Rev. D. E. Platter, Dr. E. M. Gaston, of Tranquility, O., and Miss Nancy J. Brown, of North Liberty, O.

HOUGHTON-PALMER.—September 18, at the residence of the bride's parents, by Rev. O. A. Roberts, Marie C., daughter of Dr. Simeon Palmer, of Fairhaven, Mass., and Francis W. Houghton, of New York city.

MCWHINNIE-SCOFIELD.—September 18th, at the residence of the bride's parents, by Rev. Lyman Abbott, of Cornwall-on-Hudson, N. Y., J. Wallace MacWhinnie, M.D., and H. Adele, only daughter of J. L. Scofield, Esq.

RIDENOUR-ANGIER.—In Newtown, Mass., 10th inst., by Rev. E. K. Pierce, Miss Henrietta J. Angier, and Dr. W. T. Ridenour, of Toledo, O.

TILLOTSON-MURDOCH.—September 10th, 1873, at the residence of the bride's father, Dr. Wm. M. Murdoch, by the Rev. Frank Sewell, Lieut. E. Tillotson, late U. S. Army, and Miss Mary E. Murdoch, of Urbana, O.

#### DEATHS.

FLATLEY.—In Canton, Mass., 6th inst., Thos. W. Flatley, M.D.

KITCHEN.—At Toledo, O., September 11th, 1873, of cholera infantum, Charles F., infant son of Dr. F. A. and Anna M. Kitchen, aged 4 months and 11 days.

MASON.—In New York, September 16, 1873, Goodwin, only child of Dr. E. O. and Marian J. Mason, aged 11 months and 13 days.

MURRAY.—Recently, at his late residence, Stone Fort, Ill., Dr. Thomas Murray, aged 50 years. Dr. Murray was a practitioner of long standing, and established a reputation for ability and uprightness, both as a professional man and as a citizen. His loss is severely felt by a loving family, a large circle of friends, and the community.

SWOOP.—At Pittsburg, on July 1st, 1873, George E., youngest son of Dr. William and Hannah E. Swoope, aged 22 years and 6 months.

WINCHELL.—In New York city, September 2d, after an illness of two weeks, of intermittent fever, Dr. Edward G. Winchell, of Baltimore, in the 41st year of his age.